

# SUHAS VENKATA KARAMALAPUTTI

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## Education

### PES University

Bachelor of Technology in Computer Science & Engineering - CGPA : 8.12

September 2022 - Present

Bengaluru, Karnataka

### Geetanjali Olympiad School

12th CBSE Boards : 86%

June 2020 - July 2022

Bengaluru, Karnataka

### Delhi Public School Bangalore East

10th CBSE Boards : 90%

June 2007 - May 2020

Bengaluru, Karnataka

## Experience

### Centre of Cognitive Computing and Computational Intelligence

June 2025 - August 2025

Summer Research Intern

Bengaluru, Karnataka

- Built a career advisory platform that analyzed 30,000+ job postings & descriptions and 90,000+ courses, identifying skill gaps & recommending relevant skill-sets with a precision of almost 0.98.
- Optimized DSSM(Deep Structured Semantic Model) achieving a training loss of 0.08 & validation loss of 0.04.

## Projects

### TraceOps-AI Incident Response Agent 🔗 | Python, LangGraph, MCP, Streamlit, Ollama

January 2026

- Developed an agentic AI system using LangGraph and Ollama, accelerating root cause analysis for distributed microservices.
- Integrated MCP to securely access local logs, enabling real-time correlation of error patterns across services.

### Detection & Mitigation of Replay Attacks in CCTV Systems 🔗 | Python, HTM, SHA-256, FastAPI

October 2025

- Implemented a HTM based model for lightweight, real-time anomaly detection of motion patterns, achieving an anomaly score of 0.05 on normal frames.
- Designed SHA-256-based frame hashing and verification pipeline ensuring tamper-evident and relevant CCTV footage.

### AI-Powered Career Skill Gap Analysis & Recommendation 🔗 | Python, ChromaDB, DSSM, Streamlit

July 2025

- Integrated all-MiniLM-L6-v2 embeddings with DSSM to improve semantic search and skill-course alignment.
- Delivered course recommendations achieving 0.98 precision by matching user skills with job-specific requirements.

### Blockchain-Powered AI Healthcare Insights 🔗 | Python, IPFS, Multi-Chain Blockchain, Ollama

March 2025

- Linked electronic health records (EHR) stored on IPFS to Blockchain IDs to ensure data integrity and traceability.
- Applied OCR and Ollama on patient histories to accelerate clinical decisions, predict drug interactions, and recommend treatments.

### IoT-Enabled Arduino-Based Intruder Detection & Alert System 🔗 | C++, Arduino, GSM, Sensors

April 2024

- Engineered a C++ system with ultrasonic sensors to trigger LED, buzzer, and GSM alerts on intrusion detection.
- Achieved < 100ms response time with real-time serial communication for rapid security notifications.

### Cloud File Transfer System using UDP 🔗 | Python, UDP, Socket Programming, SSL, File Handling

March 2024

- Designed a UDP-based client-server system supporting upload, download, file listing, and remote execution for files up to 100MB.
- Enabled multi-client support with parallel commands and IP handling for 5+ concurrent users.

## Technical Skills

Languages: Python, R, C, C++, Java, Rust

AI/ML: PyTorch, Scikit-learn, NLTK, SpaCy, Matplotlib, LLM, Seaborn, Ollama

Databases: MySQL, SQLite, MongoDB, ChromaDB

Tools / Platforms: GitHub, Docker, Kubernetes, Vscode, Jupyter, Google Colab, RestAPI, FastAPI, Streamlit

Operating Systems: Windows, Ubuntu, Linux

## Achievements

**Anveshana 2026:** Ranked Top 11 out of 170 capstone teams for detecting and mitigating replay attacks in CCTV systems.

**Heal-O-Code Hackathon:** Secured Top 6 out of 50+ teams by building a AI based healthcare decision support tool.

**Encode-AI Agentathon:** Achieved 2nd place for building a multi-agent Agentic AI incident investigation system.

**MRD Scholarship:** Awarded the prestigious MRD Scholarship in 1st Semester, receiving a 20% tuition fee reimbursement.